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CHAPTER – 1

INTRODUCTION

"Health is wealth" is a well known proverb accepted by the social means the health is more valuable than wealth as long as human being is strong and healthy. Healthy human being always make money termed as wealth. So health is our most valuable assets and hence it is wealth.[1]

Multivariate analysis means different types of statistical analysis which involves observation and analysis of more than one statistical outcome variable at a time.[2]

The study indicates the involvement of physical, physiological and anthropometric variables of sports women ultimately helps to find out the discussions and results of sports performance as related to it.

Kabaddi is one of the most popular games of India and its unique origin must be traceable to the early days of our history. Many regions in India claim the credit for originating it and that would perhaps indicate that the game has been popular in many parts of the country for a long time. This game has been played, in one form or other, as a popular sport, both in the villages and in the towns. Another game that comes very close to Kabaddi in nature is Kho-Kho, which is also an ancient Indian sports. Though the nature of two games – Kabaddi and

[1] Paula B., Voters Choice, Best Answer.

[2] T.W. Anderson, An Introduction to Multivariate Statistical Analysis, Wiley: New York, 1958.

Kho-Kho seems to be similar, yet there is some difference in the skills and nature of activities of both the games. The size of the courts and pre .requisites of the skills definitely denominates the difference in the playing situation in the two games. As a matter of fact, different qualities such as speed, endurance, agility, coordinative balance, turning ability, strength and kinesthetic senses etc. may grow differently in the players of two games These qualities are either the factors of physical fitness or coordinating abilities of the body.

The human body size and form varies in a variety of ways and depends upon age, sex, race, and geography. One of the main concerns of the physical anthropology and human biology is to acquire and convey the knowledge on the true ways and reasons of individual variability and differentiation. This also applied to the whole of Biology contribution taken. Kinathropometry plays an important role in deciding the particular built of the body with various measurements of the segments of the body, to be suitable for a particular game and sports to excel in that game. It has also its importance in the field of Kabaddi and Kho-Kho game. Somewhat or altogether the body height, length of the various levels and measurements of the various body segments have definite effect on the performance of these games.

Physical influences are the inherited biological characteristics that cause people to differ from each other. Personal influences are the unique events experienced by the individual that cause lasting effects on him. Socio-cultural influences are internationalized from the environment that surrounds the

individual. These influences are absorbed from parents, educators, social-institutions and various medias, and are the product of the society. These are highly competitive and sanction the expressions of aggressions than its reflections on the child. Thus when a child perform well in the sociably sanctioned activity such as sports he will usually receive reinforcement in the form of support from parents and others. The carrier of most of the athletes reveals that they were strongly reinforced early in life and encouraged to devote their energies to sport.

The effectiveness of many physical performance is related to various basic traits found in boys and girls such as their maturation, body size and physique type. Many of these traits are related to heredity, other such as body weight, heredity implications are also affected by environmental influences including the nature and amount of exercise nutrition practice and health habits.[3]

STATEMENT OF THE PROBLEM

The statement of the problem is to find out the relationship of selected physical, physiological, and anthropometric variables which ultimately influences to performance in Kabaddi and Kho-Kho.

SIGNIFICANCE OF THE STUDY

1. The finding of the study will add new knowledge in the field of Physical Education.

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[3] H. Harison Clarke, *Application of Measurement of Health and Physical Education* (Englewood Cliffs, N.J. Prentice Hall Inc., 1967). p.78.

2. The result of the study will help Physical Education teachers and coaches to find out the body composition, physiological balance, and Physical variables to select players for the Kabaddi and Kho-Kho.
3. The study would highlight some of the important variables of physical, physiological, and anthropometrical to Kabaddi and Kho-kho players.
4. Result will be helpful in selection of sports women in Kabaddi and Kho-kho for better performance.

OBJECTIVE OF THE STUDY

1. The aim of the study is to find out the relationship with physical variables of Marathi and Gujarati sports women in strength, endurance, speed.
2. The aim of the study is to find out the relationship with physiological variables of Marathi and Gujarati sports women in resting pulse rate, vital capacity, blood-pressure i.e. systolic and diastolic pressure.
3. The aim of the study is to find out the relationship with anthropometric measurements of Marathi and Gujarati sports women in height – sitting and standing, weight, foreleg length, thigh length and arm length.

LIMITATIONS

1. No motivational technique is used while collecting data therefore the difference that occurred in performance due to the lack of motivation is considered as the limitations of the study.

2. Factors like food, sleep, environment, life style of the subjects is not controlled which is accepted as a limitations of the study.

3. Women Sports Students of Veer Narmad South Gujarat University and S.N.D.T. Women's University randomly selected between age group of 18 to 23 years.

DELIMITATIONS

1. The study is delimited to 120 sports women from Veer Narmad South Gujarat University and S.N.D.T. Women's University, Mumbai.

2. The study have further delimited to the following

   (a) Physical – Strength, endurance, speed.

   (b) Physiological – Resting pulse rate, Vital capacity, blood-pressure.

   (c) Anthropometric measurement – Height – sitting and standing, weight, foreleg length, thigh length and arm length

DEFINITIONS AND EXPLANATIONS OF THE TERMS

STRENGTH

In sports, the definition of strength is the ability to move or lift a maximum weight. The extend to which a maximum force can be exerted, changes depending on training goals and how it is used in a study.[4]

[4] *Oxford Dictionary*, Oxford University Press, 2014.

ENDURANCE

The ability to endure an unpleasant or difficult process of situation without giving way.[5]

SPEED

Speed is the ability of a person to execute motor movements with high speed in the shortest period of time.[6]

RESTING PULSE RATE

The number of times a sports person's heart beats per minute while at complete rest.[7]

VITAL CAPACITY

The greatest volume of air that can be expelled from the lungs after taking the deepest possible breaths.[8]

Vital capacity is the maximum amount of air a person can expel from the lungs after a maximum inhalation.[9]

ANTHROPOMETRY

Anthropometry consists of making external measurement of the body. The results can be used to up raise body build, nutritional status and posture.[10]

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5 *Oxford Dictionary*, Oxford University Press, 2014.
6 *Oxford Dictionary*, Oxford University Press, 2014.
7 Dave McGovern, *Dave's World-class Race walking*, February 19, 2014.
8 Wikipedia, The free encyclopedia.
9 Journal of the Royal Society of Medicine, 1978.

Anthropometric measurements are dimensions of the structure of the human body taken at specific sites to give measures of length, girth and width.[11]

HYPOTHESIS

1. There will be no significant difference between Marathi and Gujarati sports women in physical parameters.
2. There will be no significant difference between Marathi and Gujarati sports women in physiological parameters.
3. There will be no significant difference between Marathi and Gujarati sports women in anthropometric measurements in performance in Kabaddi and Kho-kho.

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[10] H. Harsion Clarke, *Application of Measurement to health and physical Education* (Englewood cliffs, N.J. Prentice Hall Inc. 1963) p.173.

[11] Meyors, *Measurement in Physical Education* cited from Joselet Charles, "Anthropometric and Physical Correlates of motor fitness of Tribal and non-tribal student at different age level", Thesis (1987) p.11.

CHAPTER – 2

REVIEW OF RELATED LITERATURE

Cluphf,[12] has done a study and the purpose was to evaluate the physiological effects of a 12 week program of low impact aerobic dance on adults with mental retardation.

Analysis revealed that there were significant inter actions between the groups on all of the dependent variables. The experimental group improved on all dependent variables, while the control group declined or stayed the same post hoc analysis of within group differences indicated that four to eight weeks was when the greatest improvement in the fitness scores of the experimental group look place. The 8 to 12 week period appeared to be a time of maintenance. Person correlations coefficients were also utilized to determine relationship between the participants working heart rate during the exercise session and scores on the dependent variables. Moderately strong correlations were found on three of the variables (RFWT times, body compositions and flexibility) but not on the other (Post walk heart rate). A follow up set of fitness tests was performed six weeks after declined in all of the dependent variables. It was also revealed that the participants found the program to be very enjoyable, and were exceptionally eager to be involved.

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[12] Cluphf, David John, "The Physiological effects of a 12 week program of progressive low-impact aerobic dances on adults with mental retardation." *Dissertation Abstract International*, Vol. 62 (July 2001) p.112-a.

Keefer,[13] has done several studies documented the associations between lower extremely muscle co-contraction and walking energy expenditure, lower extremity muscle strength and walking energy expenditure, and lower extremity muscle co-contraction and lower extremity muscle strength. The purpose of the study was to quantity interrelationship among thigh muscle co-contraction, quadriceps muscle strength and the aerobic demand of walking. Each subject was asked to report to the laboratory on three separate occasions, during session-I, subjects were familiarized with testing procedures, given 5 minutes of treadmill walking practice and completed the quadriceps muscle strength test. In session-II, subject completed 35 minute walking bones one the treadmill a 0.67 m 05-1 for 5 minutes while energy expenditure and thigh muscle co-contraction were collected. Results of the study show that no significant relationship is present between net VO2 or EE1HR and measures of thigh muscle co-contraction or quadriceps muscle strength. In addition thigh muscle co-contraction was not shown to be associated with quadriceps muscle strength.

Maina,[14] has done a study and purpose was to investigate the effects of an eight week fitness curriculum on the fitness knowledge, fitness test scores, attitude and self-efficacy towards physical activity of fifth grade children.

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[13] Keefer, Diniel Joseph, "International ship among Thigh Muscle Co-contraction Quadriceps Muscles Strength and the Aerobic Demand of Walking in Children with Cerebral Palsy." *Dissertation Abstracts International*, Vol. 62 (Dec. 2001) p.2067-A.

[14] Maina, Julie Schlegal, "Effects of an Eight Week Fitness Curriculum on the Fitness Knowledge, Fitness test score Attitude and Self-efficacy Towards Physical Activity of Fifth Grade Children," *Dissertation Abstract International*, Vol. 63 (Sep. 2002) pp.889A-890A.

The results of the independent sample t-test on the children's physical Activity Attitude and self-efficacy survey indicate the contribution of the intervention to the explained variance was minimal and not statistically significant. The results of the one way ANCOVA on the modified versions of the Superkids-Superfit knowledge Test and the fitness Gram play fitness test indicate the contribution of the intervention to the explained variance was minimal and not statistically significant.

Nataraj and Chandrakumar[15] have undertaken the study to reveal the relationship of selected motor ability variables to the game performance of Kabaddi players who have played at the junior national level. Tests of muscular endurance, muscular power, speed, agility, aerobic endurance and coordinative ability were administered and data was obtained from 61 players.

It was concluded that significant relationship was found between selected motor ability variables and Kabaddi performance. Performance in Kabbadi is significantly influenced by arm and abdominal strength, arm and leg power and kinesthetic differentiation ability of upper and lower limbs.

M.S. Chauhan and Ramchander[16] have done the study and the purpose was to determine the correlation between the selected anthropometric variables and explosive leg strength and also to develop the regression equation for the

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15 H.V. Nataraj and Chandrakumar, 'Selected Motor Ability Variables and Kabaddi Performance', *Journal of Sports and Sports Science*, January 2005, Vol. 29, pp. 11-15.

16 M.S. Chauhan and Ramchander, 'Prediction of Explosive Leg Strength of Volleyball Players and related to their Anthropometric Variables', *Journal of Sports and Sports Science*, April 2009, Vol. 32, pp. 23-25.

prediction of explosive leg strength of volleyball players between the age range of 18 to 24 years.

To conduct the study, forty college volleyball players, who participated at University level, between the age range of 18 to 24 years, were selected as subjects of the study.

It is evident that age, weight, height, sitting height, trunk length, leg length, lower leg length, thigh length, total arm length, foot length and foot breadth have positive and significant correlations with explosive leg strength of volleyball players at 1% level. It suggests that these variables contribute to the performance of explosive leg strength of volleyball players.

The correlations of shoulder, chest, abdomen, hip, thigh, and calf girths are positive and significant explosive leg strength of volleyball players, at 1% level. It means that these diameters assist in the performance to with explosive leg strength of volleyball players.

V. Amutha and V. Jayanthi[17] have done a study to know whether "PRANAYAMA" practice influences selected Physiological variables of women Kabaddi Players. For this study, twelve women Kabaddi players from Annamalai University, in the age group of 17-25 years, were selected; and the variables chosen were (i) resting pulse rate (ii) maximum breath holding (iii) systolic blood pressure and (iv) diastolic blood pressure. The tests were conducted with the usage

[17] V. Amutha and V. Jayanthi, 'Influence of Pranayama Practice on Selected Physiological Variables of Women Kabaddi Players', *Journal of Sports and Sports Science*, January 2010, Vol. 33, pp. 22-25.

of stop watches, with calibration of 1/10 seconds, score sheet, pencil, Sphygmomanometer and Stethoscope.

To achieve the purpose of this study, 12 female Kabaddi players from Annamalai University, in the age group of 17-25, were chosen as subjects.

And the following variables were selected:

1) Maximum breath holding

2) Resting pulse rate

3) Blood Pressure (Systolic and Diastolic)

The resting pulse rate was recorded in beats per minute.

The maximum breath holding time was recorded in seconds. The blood pressure was recorded in Hg.

CHAPTER – 3

METHODOLOGY

In this chapter the methodology adopted for selection of subjects, selection of variables, reliability of data, collection of data instrument reliability, description of the test are described.

SELECTION OF SUBJECTS

For the purpose of the study sixty players will be taken from S.N.D.T. Women's University. Another sixty girls player have been selected from Veer Narmad South Gujarat University.

The subjects had more or less close homogeneity in their training, living habits, social and geo-graphical conditions. They will undergo regular training in their respective universities. The age of the subjects ranged from 18 to 22 years.

SELECTION OF VARIABLES

The following physical, physiological and anthropometric variables which will be considered to be the major factors will be selected for the purpose of the study.

Physical Parameters

Physical fitness is the basis of sports performance and it is a complete phenomenon consisting of various factors like strength, Power, endurance etc. and

these factors are the major concern of training and every athlete is required to have more emphasis on one or the other factor depending upon the nature and demand of the sports she does.

Strength is the primary unit of physical fitness and the effect of strength is easily demonstratable through the feats of performance by over-coming higher degree of resistance. Depending upon the magnitude and type of resistance to be tackled in various sports, sportsmen need different level and types of strength experiences to achieve good performance.

Strength is highly related to speed. This fact might indicate that improving the strength of the moving part of the body might result in a corresponding increase in speed. Generally when speed is discussed one might think of leg speed in running activity which involve in Kho-kho game.

But speed like reaction time. Speed of movement etc. concerns many parts and may vary from one part to other. Speed of muscle contractions would appear to be an innate quality, but certainly speed of movement used in running events can be improved through proper scientific training. Almost all the sports require fast and explosive movements, therefore the importance of speed can not be underestimated. To sustain the game performance one has to have endurance and hence the following physical variables will be selected for this study.

a) Strength

b) Endurance

c) Speed

Physiological Parameters

The physical work capacity of man depend upon the ability to manage the energy required for working under continuous supply of oxygen, for energy metabolism with delayed supply of oxygen during recovery stage. The capacity for prolonged physiological functioning demanding cardiovascular endurance depends upon aerobic capacity, intensive burst of activities depends upon anaerobic capacity.

Involvement of systematic and scientific programme of training brings about desirable changes in the physical and physiological factors contributing to the development of strength, speed and endurance besides marked changes in resting pulse rate haemoglobin parameters. Therefore the following physiological variables will be selected for this study.

1. Vital capacity
2. Resting pulse rate
3. Blood pressure

Anthropometric Measurement

The physical structure and the composition of the body is proved to be one of the most important factors which decide the level of performance one can attain in any sports. Under modern conditions especially related to training for sports with a focus on superior performance adequate emphasis is given for the physical structure and body build of each individual.

Anthropometric measurements consist of the objective measurements of body structure. The measurements of structure includes items such as weight, length, height, depth and circumference of different parts of the body. Body composition also has been considered as a vital factor along with physical fitness components which contribute to the sports performance. The body composition changes as a result of training and there is a decrease in total body fat, slight change in lean body mass and decrease in total body weight. Excess body fat generally has been considered to be a liability in performance of motor activities. Thus the following anthropometric measurements were selected for this study.

1. Height (Standing)
2. Sitting height
3. Weight
4. Leg length
5. Arm length

RELIABILITY OF DATA

The reliability of data will be ensured by establishing the instruments reliability and the tester competency and reliability of the tests.

Instrument Reliability

The steel tape will use for measurement of anthropometry which is non-elastic and flexible (supplied by Freeman's, India).

The weighing machine to be used for measuring weight will be tested for its accuracy by weighing and comparing different persons already weighted on a standard balance. Its reliability will be examined and confirmed.

Blood pressure measurement will be done by using the instrument sphygmomanometer & stethoscope. Before using for data collection. It will be checked and confirmed and recorded in milimeters of mercury (mm/hg).

Weight of the subject will be recorded to half a kilogram, using a standard weighing machine.

Height (standing) will be recorded to the nearest centimeter with the help of a scale fixed on the wall.

Sitting height will be recorded to the nearest centimeter by making a student sit on a table kept close to the marked wall.

Vital capacity will be recorded in 100 ml unit by using a dry spirometer.

Resting pulse rate will be recorded in numbers by counting the pulse on redial artery for one minute.

DESCRIPTION OF THE TEST

Weight

The weight of the subject will be taken on a weighing machine. The subjects wearing minimum of clothes, will stand on the weighing machine and weight will be recorded to half a kilogram.

Standing Height

The standing height will be taken with the subject standing erect without shoes against a wall with a marked scale. The subject will be instructed to keep the heels together, touching the wall with heels buttock and back erect without tilt and to take and hold a full breadth and stand tall while measurement will be taken. A stiff hard board will be hold vertically on his head, slightly pressing his head and touching the scale marked on the wall at right angle. The subject will be asked to step out by lowering the head and will take read on the scale. Height will be recorded to nearest centimeter.

Sitting Height

The sitting height will be taken with the subject sitting erect on a table against a marked scale on a wall, with the feet unsupported and hand resting on thigh. A stiff hard board will be hold vertically on the head and touching the scale marked on the wall at a right angle. The subject will be asked to move out and the distance will be read between sitting surface and reading indicating by the lower end of hard board on the scale. The sitting height will be recorded to the nearest centimeters.

Leg Length

Leg length of the subject will be measured with a flexible steel tape from the mid-gluteal line to the bottom of the foot. As a check on accuracy the thigh

length and foreleg length will be added to see whether the measurement is correct or not. Leg length will be recorded to the nearest centimeter.

Arm Length

The arm length will be measured with a flexible steel tape. The measurement will be taken from the top center of the shoulder to the tip of the - middle finger. The arm length will be recorded to the nearest centimeter.

Vital Capacity

Vital capacity will be measured with the help of Dry Spyro meter.

It will be ensured that the pointer of the scale is at the zero mark at the beginning of the test. The subject will take two deep breaths before starting the test. And after fullest inhalation the subject placed the mouthpiece attached to the nose connected to the Spiro meter in his mouth taking care to see that no air escaped through the edges of the mouth piece. The subject will be inhaled slowly and steadily while bending forward slightly until the maximum volume of air could be exhaled without taking in second breath. The score of vital capacity for each subject will be recorded in Liters.

Resting Pulse Rate (Heart rate)

Heart / Pulse rate will be taken in the morning.

The research scholar will visit the hostels of girls and they will be called in the morning for obtaining the pulse rate. 15 minutes before taking the pulse rate

the subjects will be asked to lie down in a supine lying position and rest themselves on the bed. The pulse rate will be counted from the radial artery by keeping the fingers pressed over it for one minute. The pulse rate will be recorded in numbers per minute.

Blood Pressure

A dial type sphygmomanometer and a stethoscope will be used for measuring the systolic and diastolic blood pressure. Before the measurements will be taken, each subject will be placed in a comfortable position. While taking blood pressure the subjects left arm will be completely bared to make sure that the clothing do not constrict the blood vessels. The blood pressure measurement will be taken of the subject in a sitting position, his forearm will be supported on the handle of the chair. The cuff will be wrapped around the arm evenly the lower edge approximately one inch above the ante cubical space. The stethoscope receiver will be placed gently over the artery in anti cubical space. It will be make sure that stethoscope is free from contact with the cuff. The cuff will be inflated until the artery is finally pressed to the extent that no pulse beat could be heard. Pressure will be then slowly release as the investigator watch the dial when the first sound of the pulse become audible the reading in millimeters of mercury (mm/hg) instant was recorded as systolic blood pressure. The pressure will be further released gradually, as the sound of the pulse changed in intensity and quality. The index of the diastolic pressure will be noted and recorded in mm/hg when the heart sound completely ceased.

CHAPTER – 4

ANALYSIS OF DATA AND RESULTS OF THE STUDY

The statistical analysis of data of coefficient of variation, mean 'T' and 'F' test on selected physical components, physiological components and anthropometric characteristics collected on S.N.D.T. Women's University, Mumbai and Veer Narmad South Gujarat University (V.N.S.G.U.), Surat are presented in this chapter.

SCORING OF DATA

All the subjects had their tests in various variables such as height, weight, foreleg length, thigh length, arm length, vital capacity, Resting pulse rate, blood pressure, strength, endurance and speed. Each selected variable was correlated, compared with mean, coefficient of variation, 'T' test and 'F' test separately.

RELIABILITY OF DATA

To ensure the consistency of anthropometric characteristics the measurements were taken five times in each component and the average of the five scores were considered the scores of each measurement shown in Table–1.

Table – 1

Sr. No.	Variables	S.N.D.T.	V.N.S.G.U.
1.	Height	7.2638	5.4829
2.	Weight	17.0811	17.844
3.	Foreleg Length	7.3577	15.5167
4.	Thigh Length	7.1783	15.2775
5.	Arm Length	6.1837	13.6805

To ensure the consistency of physiological characteristics the reading was taken on two days with an interval of one day. The scores of the two days thus obtained were correlate and the coefficient of variation obtained for each test of physiological components are shown in Table – 2.

Table – 2

Sr. No.	Variables	S.N.D.T.	V.N.S.G.U.
1.	Vital Capacity	19.8485	15.8210
2.	Resting Pulse rate	2.6443	8.0843
3.	Blood Pressure	6.8421	10.9933

To ensure the consistence of performance of physical components tests were repeated on two days with an interval of one day. The scores of the two days thus obtained were correlate and the coefficient of variation obtained for each test of physical components shown in Table – 3.

Table – 3

Sr. No.	Variables	S.N.D.T.	V.N.S.G.U.
1.	Strength	12.0800	6.8691
2.	Endurance	17.0062	5.9487
3.	Speed	7.7134	4.1257

FINDING

Table – 1

Reveled that the mean are equal and variation in also equal but 'T' & 'F' tests shows difference as the height of V.N.S.G.U. students are more consistence than S.N.D.T. students. For the weight 'T' and 'F' test reveals that there is no equality of mean and variation but C.V. shows that S.N.D.T. students are more consistence than the students of V.N.S.G.U.

For the leg length 'T' and 'F' test reveals that there is no equality in mean and variation but by comparison the C.V. for both sample shows that for this characteristics S.N.D.T. students are more consistent than V.N.S.G.U. students.

For thigh length 'T' and 'F' test shows no equal mean and variation but both for population and sample shows that the students of S.N.D.T. are more consistent than V.N.S.G.U. students.

For arm length 'T' and 'F' test shows that there is no equality in variation but for both population and sample we can say that the students of S.N.D.T. are more consistent that V.N.S.G.U. students.

Table – 2

For vital capacity 'T' and 'F' test shows are equal but C.V. indicates that V.N.S.G.U. students are more consistence than S.N.D.T. students.

For resting pulse rate 'T' test shown equal mean but 'F' test shows variation and it shows that S.N.D.T. students are more consistent than V.N.S.G.U. students.

For blood pressure 'T' test mean are most equal and for 'F' test variation is equal C.V. shows that the students of S.N.D.T. are more consistent than the students of V.N.S.G.U.

Table – 3

For strength 'T' and 'F' tests shows mean and variation are not equal but so far characteristics are concern V.N.S.G.U. students are more consistent than the students of S.N.D.T.

For endurance 'T' and 'F' tests reveals equal but C.V. is less for V.N.S.G.U. which shows more consistent.

For speed 'T' and 'F' test shows no difference but C.V. reveals that V.N.S.G.U. students are more consistent than S.N.D.T. students.

DISCUSSION OF FINDINGS

The findings of the study indicated (Table – 1) that anthropometric characteristics of S.N.D.T. students are significantly correlated with the performance in Kabaddi and KhoKho where as the characteristics of V.N.S.G.U. students are not significant with the performance.

The findings of the study indicated (Table – 2) that physiological variables of S.N.D.T. Women's university, Mumbai is more consistent than V.N.S.G.U., Surat except vital capacity in which V.N.S.G.U. students are consistent than the students of S.N.D.T. University.

The findings of the study indicated (Table – 3) that physical variables of V.N.S.G.U. students are more consistent than the students of S.N.D.T. University.

CHAPTER – 5

SUMMARY, CONCLUSION AND RECOMMENDATION

SUMMARY

The purpose of the study was to find out the relationship and differences of selected physical, physiological and anthropometric variable to the performance in Kho-Kho and Kabaddi. Forty-eight students have been taken from V.N.S.G.U. and another forty-eight students have been taken as subjects from S.N.D.T. Women's University, Mumbai.

The data on different variables of V.N.S.G.U. students and S.N.D.T. students were correlated and compared with statistical implementation like mean, 'T' test and 'F' test. The standardized procedures were adopted for conducting all measurements and tests.

In most of the tests of different variables, the students of S.N.D.T. Women's University, Mumbai are consistent than V.N.S.G.U. students, Surat and certainly it resulted in game performance.

CONCLUSIONS

Within the limitation identified and on the basis of the results of the study, the following conclusions were drawn:

1. The height, weight, foreleg length, thigh length, arm length are consistent for S.N.D.T. students which is correlated with the performance in Kho-Kho and Kabaddi.
2. The vital capacity, blood pressure, resting pulse rates are more consistent for S.N.D.T. students which results in performance in Kho-Kho and Kabaddi.
3. The strength, endurance and speed are seems to be more consistent for V.N.S.G.U. students than the students of S.N.D.T. Women's University, Mumbai. Hence physical variables are more effective of V.N.S.G.U. as far as the performance is concern.

RECOMMENDATIONS

On the basis of the conclusions of the present study the following recommendations may be made:

1. A similar study may be undertaken involving other variables such as psychological, sociological factors.
2. A similar study may be undertaken with subjects of different age groups and their level of performance.
3. A similar study may be undertaken with the male members as subjects.

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